

Old Lake Shore Road Bridge

CONNECTING TRAVELERS TO NEW HAMPSHIRE'S LAKES REGION

Durable and Dependable

The 1927 Old Lake Shore Road Bridge was built as part of the Winnepesaukee Road Cross-State Highway (later Route 11). Replaced in 2019-20 due to its deteriorated condition, the concrete slab bridge was an example of a bridge type that became common in the state in the 1920s. However, the use of two spans was somewhat atypical for this bridge type.



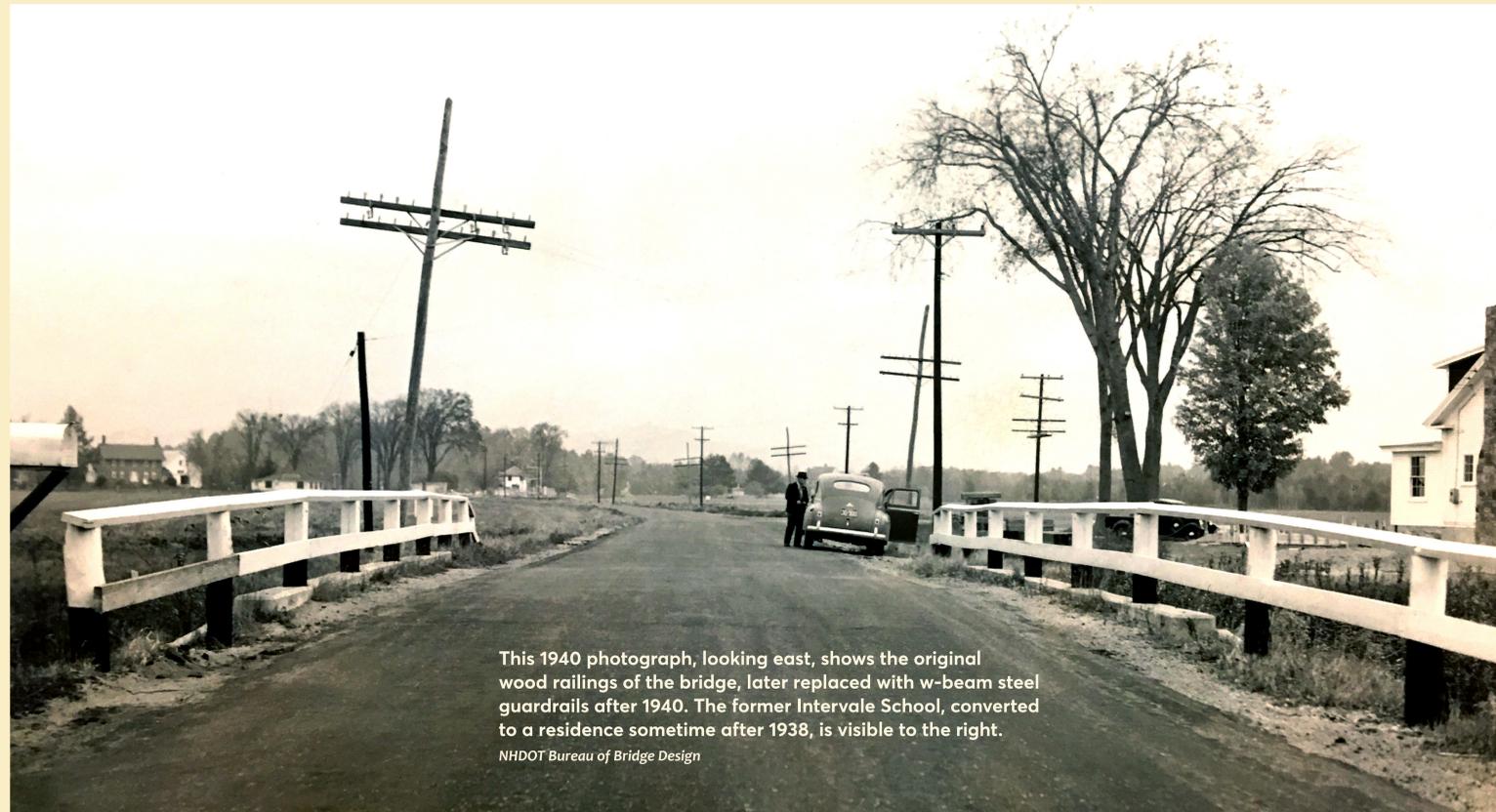
1940 photo shows the upstream side of the bridge. NHDOT Bureau of Bridge Design



Upstream view of the bridge before it was replaced in 2019-20.

Cast in Place

By the 1920s, the highway department began to use standardized plans for bridge designs, with reinforced concrete slab bridges a popular design choice for smaller crossings. Their small size made them simple to design and build and economical to construct because their concrete parts could all be cast in place. Design features of this bridge included a continuous reinforced concrete slab spanning the crossing, a reinforced concrete center pier with concrete abutments, and wing walls.

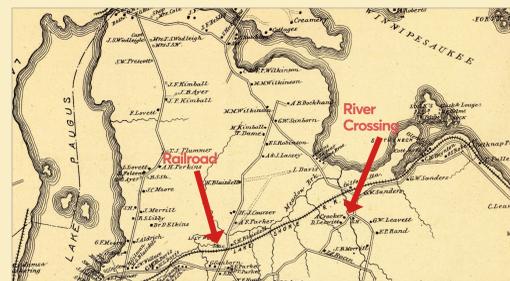


This 1940 photograph, looking east, shows the original wood railings of the bridge, later replaced with w-beam steel guardrails after 1940. The former Intervale School, converted to a residence sometime after 1938, is visible to the right. NHDOT Bureau of Bridge Design

Railroad Fuels Growth

A crossing of Gunstock River in this general location dates at least to the early nineteenth century. This area, historically known as Gilford's Intervale or Sander's Intervale, included a schoolhouse and scattered farms. The sparse settlement pattern began to change with the completion in 1890 of the 17.5-mile long Lake Shore Railroad, along the south side of Lake Winnepesaukee.

Increased development led to intensified usage of what was then known as Old Lake Shore Road. The road evolved into the main east-west route between Glendale and Lake Village (now Lakeport) on Paugus Bay. By the 1920s, increased automobile traffic required a new bridge better suited to the higher traffic volume.



This 1892 map shows the location of the earlier river crossing and the road's proximity to the Lake Shore Railroad. D.H. Hurd Map of Gilford, Belknap County



A 1941 tourist map shows relationship of U.S. Route 3 and State Routes 11, 11A and location of bridge before Route 11 was rerouted, bypassing the bridge. NH State Planning and NH State Highway Depts.

Envisioning Tourism

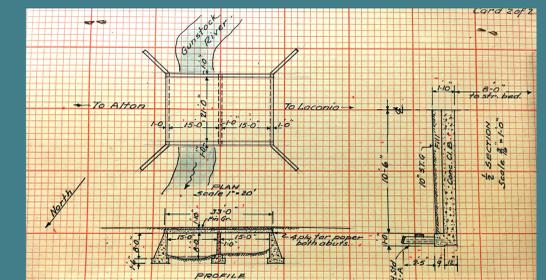
By 1910, the state had begun upgrading its road system, part of the nation-wide Good Roads Movement. The program improved existing roads and designed new highways to promote automobile tourism and attract visitors to the state for recreation. This undertaking started with three primary south-north highways. Then, in 1915, the state authorized construction of twelve cross-state highways. All bridges built on these highways had to have a capacity of at least ten tons. This included the Winnepesaukee Road Highway which extended thirty-nine miles from Route 16 in Rochester to Route 3 in Laconia/Lakeport. It took much of the 1920s to complete. Later, portions of the route in Gilford were relocated to the north. The section crossing the Gunstock River became Old Lake Shore Road.

Innovative Engineer

The 1927 Old Lake Shore Road Bridge was designed by Harold Edward Langley (1896-1991) who had a lengthy and distinguished career with the state's highway department. From 1919 to 1961, he played a major role in bridge design and construction activity occurring extensively throughout the state. A New Hampshire native and 1917 graduate of M.I.T., Langley began his career with the highway department as a resident engineer. He rose through the ranks to become Bridge Engineer in 1942. In this top supervisory position, which he held for the second half of his career, he had oversight of the design engineers and their bridge designs. Known for his expertise with concrete, arches, and steel, he designed more than 360 bridges and structures and supervised the design of hundreds more.



Harold E. Langley, Bridge Engineer (left), Robert J. Prowse, Designer, and John O. Morton, Chief Engineer, of the New Hampshire Department of Public Works and Highways. Courtesy of the Prowse family



1940 Bridge Card illustrating bridge plan and design details. NHDOT Bureau of Bridge Design

This interpretive panel was produced in cooperation with the New Hampshire Department of Transportation, the New Hampshire Division of Historical Resources, the Army Corps of Engineers, and the Town of Gilford, as mitigation under Section 106 of the National Historic Preservation Act for the removal of the historic Old Lake Shore Road Bridge. Text by Preservation Company, 2020.